

Professional and Managerial Branch
Code Enforcement Group
Building Services Series

FIRE PROTECTION ENGINEER

03/97 (TLW)

Summary

Under general direction, advise and assist developers, contractors and other organizations or individuals to ensure the adequacy of construction, renovations or similar plans for purposes of safeguarding life and property against fire, explosion and related hazards.

Typical Duties

Approve or disapprove building plans submitted for fire and life-safety review. Involves: ensuring accessibility for emergency vehicles and prevention of the spread of fire to adjoining properties by checking location, occupancy, fire and land-use zones, special hazards and property line clearances; evaluating fire resistance of building construction by examining factors such as building compartmentation, fire and smoke barriers, and protection of vertical openings and concealed spaces; identifying building materials with high smoke production or densities or those releasing high quantities of toxic gases and recommending alternatives; verifying location and installation of portable fire extinguishers, fire detection, signaling and automatic extinguishing systems; analyzing water supply systems for type and location of hydrants, pump systems, cross-connected water supplies and location, and size of public water mains to ascertain that sufficient water quantities and pressures are available for emergency needs; assessing heating, ventilating and air conditioning systems for type of refrigerant, automatic shutdown and exhaust functions, location of fire and smoke dampers and exit stairwell pressurization necessary to control spread of fire and smoke; examining electrical drawings to ensure adequate illumination of exit ways, level of illumination, power sources, emergency power and other special considerations; evaluating sprinkler systems and special extinguishing systems such as those using halon, foam, carbon dioxide, dry or wet chemical, checking temperature rating, type, orifice size, area of coverage, use in special areas, and spacing and location of sprinklers; verifying usage and contents of building; interpreting and explaining code and design requirements and restrictions.

Provide technical guidance to inspection and plan review personnel. Involves: preparing instructional materials; preparing and presenting lectures and demonstrations; assisting in development of new or revised codes and ordinances; drafting recommendations to improve fire protection policies and practices; reviewing codes, ordinances and fire protection standards from other jurisdictions for possible local application; providing professional technical assistance on proposed utilization of new fire retardant materials and new construction materials and methods; making recommendations regarding hazardous chemical processing and related equipment installation as requested.

Perform related work as required. Involves: preparing plan review letters and scheduling follow-up reviews; performing field inspections to assist inspectors with difficult or unusual code requirement compliance; preparing and maintaining record of plan checking procedures; providing relevant information concerning code standards and regulations to the public; testifying in court and before Building Board of Appeals.

Minimum Qualifications

Training and Experience: Graduation from an accredited college or university with a Bachelor's Degree in Fire Protection Engineering, Civil or Structural Engineering and three (3) years professional engineering experience including two (2) years of fire protection engineering; or an equivalent combination of training and experience.

Knowledge, Abilities and Skills: Considerable knowledge of: principles and practices of fire protection engineering; fire extinguishing and related building, fire, and life-safety systems; current construction methods and materials; structural principles and building practices; terms, symbols and techniques employed by architects, engineers and designers in construction drawings and specifications. Good knowledge of national, state and local regulations and recognized professional standards as they related to fire prevention engineering.

Ability to: interpret applicable regulations and professional standards; check and evaluate engineering plans, designs, specifications, constructions materials, and various fire suppression systems used in various construction projects; perform and review engineering calculations; prepare manuals; enforce applicable building, fire and life-safety ordinances and regulations tactfully, firmly and impartially; maintain effective working relationships with fellow employees, other departments and agencies, general public, architects, engineers and contractors; express oneself clearly and concisely, both orally and in writing; maintain records and prepare reports.

Skill in the operation of motor vehicle through city traffic.

Physical Requirements: Occasionally move on uneven terrain at constructions site and exposure to varying weather conditions while conducting field investigations.

Special Requirements: Be available for work beyond standard workday or workweek hours as necessary.

Licenses and Certificates: Registration as a Professional Engineer in the United States required at time of appointment. Registration as a Professional Engineer in Texas required within one (1) year following appointment. Valid Texas Class "C" Driver's License or equivalent issued by another state by time of appointment.

Director of Personnel

Department Head

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